

Claim 9, lines 1 and 2 - please delete "any of claims 1 to 5," and insert -- claim 1 --

Claim 10, lines 1 and 2 - please delete "any of claims 1 to 5," and insert

-- claim 1 --;

Claim 11, lines 1 and 2 - please delete "any of claims 1 to 5," and insert

-- claim 1 --;

Claim 12, lines 1 and 2 - please delete "any of claims 6 to 11" and insert

-- claim 6 --.

Please add the following new claims:

13. A coke oven according to claim 4, further characterized in that at least one of said air port and said lean-gas port is provided with an aperture adjusting member for adjusting the flow of lean gas and/or air.

14. A method of operating a coke oven according to claim 2, characterized by effecting singlestage combustion by supplying a total amount of lean gas and a total amount of air from said lean-gas port and said air port provided in the bottom of said combustion chamber, respectively.

15. A method of operating a coke oven according to claim 3, characterized by effecting singlestage combustion by supplying a total amount of lean gas and a total amount of air from said lean-gas port and said air port provided in the bottom of said combustion chamber, respectively.

16. A method of operating a coke oven according to claim 4, characterized by

effecting singlestage combustion by supplying a total amount of lean gas and a total amount of air from said lean-gas port and said air port provided in the bottom of said combustion chamber, respectively.

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17. A method of operating a coke oven according to claim 5, characterized by effecting singlestage combustion by supplying a total amount of lean gas and a total amount of air from said lean-gas port and said air port provided in the bottom of said combustion chamber, respectively.

18. A method of operating a coke oven according to claim 2, characterized by effecting multistage combustion by supplying a total amount of lean gas from said lean-gas port provided in the bottom of said combustion chamber, 20-70% by volume of the air from said air port provided in the bottom of said combustion chamber, and the rest of the air from port(s) provided in a flue partition wall of said combustion chamber.

19. A method of operating a coke oven according to claim 3, characterized by effecting multistage combustion by supplying a total amount of lean gas from said lean-gas port provided in the bottom of said combustion chamber, 20-70% by volume of the air from said air port provided in the bottom of said combustion chamber, and the rest of the air from port(s) provided in a flue partition wall of said combustion chamber.

20. A method of operating a coke oven according to claim 4, characterized by effecting multistage combustion by supplying a total amount of lean gas from said lean-gas port provided in the bottom of said combustion chamber, 20-70% by volume of the air from said air port provided in the bottom of said combustion chamber, and the rest of the air from port(s) provided in a flue partition wall of said combustion chamber.

21. A method of operating a coke oven according to claim 5, characterized by effecting multistage combustion by supplying a total amount of lean gas from said lean-gas port provided in the bottom of said combustion chamber, 20-70% by volume of the air from said air port provided in the bottom of said combustion chamber, and the rest of the air from port(s) provided in a flue partition wall of said combustion chamber.

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22. A method of operating a coke oven according to claim 2, characterized by effecting multistage combustion by supplying part of lean gas from said lean-gas port provided in the bottom of said combustion chamber, the rest of the lean gas from said port(s) provided in said flue partition wall of said combustion chamber, and the total amount of the combustion air from said air port provided in the bottom of said combustion chamber.

23. A method of operating a coke oven according to claim 3, characterized by effecting multistage combustion by supplying part of lean gas from said lean-gas port provided in the bottom of said combustion chamber, the rest of the lean gas from said port(s) provided in said flue partition wall of said combustion chamber, and the total amount of the combustion air from said air port provided in the bottom of said combustion chamber.

24. A method of operating a coke oven according to claim 4, characterized by effecting multistage combustion by supplying part of lean gas from said lean-gas port provided in the bottom of said combustion chamber, the rest of the lean gas from said port(s) provided in said flue partition wall of said combustion chamber, and the total

amount of the combustion air from said air port provided in the bottom of said combustion chamber.

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25. A method of operating a coke oven according to claim 5, characterized by effecting multistage combustion by supplying part of lean gas from said lean-gas port provided in the bottom of said combustion chamber, the rest of the lean gas from said port(s) provided in said flue partition wall of said combustion chamber, and the total amount of the combustion air from said air port provided in the bottom of said combustion chamber.

26. A method of operating a coke oven according to claim 2, characterized by effecting multistage combustion by supplying part of the lean gas from said lean-gas port provided in the bottom of said combustion chamber, the rest of the lean gas from said port(s) provided in said flue partition wall of said combustion chamber, and 20-70% by volume of the combustion air from said air port provided in the bottom of said combustion chamber, and the rest of the combustion air from said port(s) provided in said flue partition wall of said combustion chamber.

27. A method of operating a coke oven according to claim 3, characterized by effecting multistage combustion by supplying part of the lean gas from said lean-gas port provided in the bottom of said combustion chamber, the rest of the lean gas from said port(s) provided in said flue partition wall of said combustion chamber, and 20-70% by volume of the combustion air from said air port provided in the bottom of said combustion chamber, and the rest of the combustion air from said port(s) provided in said flue partition wall of said combustion chamber.

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28. A method of operating a coke oven according to claim 4, characterized by effecting multistage combustion by supplying part of the lean gas from said lean-gas port provided in the bottom of said combustion chamber, the rest of the lean gas from said port(s) provided in said flue partition wall of said combustion chamber, and 20-70% by volume of the combustion air from said air port provided in the bottom of said combustion chamber, and the rest of the combustion air from said port(s) provided in said flue partition wall of said combustion chamber.

29. A method of operating a coke oven according to claim 5, characterized by effecting multistage combustion by supplying part of the lean gas from said lean-gas port provided in the bottom of said combustion chamber, the rest of the lean gas from said port(s) provided in said flue partition wall of said combustion chamber, and 20-70% by volume of the combustion air from said air port provided in the bottom of said combustion chamber, and the rest of the combustion air from said port(s) provided in said flue partition wall of said combustion chamber.

30. A method of operating a coke oven according to claim 2, characterized by effecting singlestage combustion by supplying the total amount of a rich gas from said rich-gas port, and the total amount of air from said air port and/or said lean-gas port, said respective ports being provided in the bottom of said combustion chamber.

31. A method of operating a coke oven according to claim 3, characterized by effecting singlestage combustion by supplying the total amount of a rich gas from said rich-gas port, and the total amount of air from said air port and/or said lean-gas port, said respective ports being provided in the bottom of said combustion chamber.

32. A method of operating a coke oven according to claim 4, characterized by effecting singlestage combustion by supplying the total amount of a rich gas from said rich-gas port, and the total amount of air from said air port and/or said lean-gas port, said respective ports being provided in the bottom of said combustion chamber.

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33. A method of operating a coke oven according to claim 5, characterized by effecting singlestage combustion by supplying the total amount of a rich gas from said rich-gas port, and the total amount of air from said air port and/or said lean-gas port, said respective ports being provided in the bottom of said combustion chamber.

34. A method of operating a coke oven according to claim 2, characterized by effecting multistage combustion by supplying the total amount of a rich gas from said rich-gas port provided in the bottom of said combustion chamber, 50% by volume or more of the air from said air port and/or said lean-gas port provided in the bottom of said combustion chamber, and the rest of the air from said port(s) provided in said flue partition wall of said combustion chamber.

35. A method of operating a coke oven according to claim 3, characterized by effecting multistage combustion by supplying the total amount of a rich gas from said rich-gas port provided in the bottom of said combustion chamber, 50% by volume or more of the air from said air port and/or said lean-gas port provided in the bottom of said combustion chamber, and the rest of the air from said port(s) provided in said flue partition wall of said combustion chamber.

36. A method of operating a coke oven according to claim 4, characterized by effecting multistage combustion by supplying the total amount of a rich gas from said rich-

gas port provided in the bottom of said combustion chamber, 50% by volume or more of the air from said air port and/or said lean-gas port provided in the bottom of said combustion chamber, and the rest of the air from said port(s) provided in said flue partition wall of said combustion chamber.

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37. A method of operating a coke oven according to claim 5, characterized by effecting multistage combustion by supplying the total amount of a rich gas from said rich-gas port provided in the bottom of said combustion chamber, 50% by volume or more of the air from said air port and/or said lean-gas port provided in the bottom of said combustion chamber, and the rest of the air from said port(s) provided in said flue partition wall of said combustion chamber.

38. A method of operating a coke oven according to claim 7, further characterized by changing the purging direction of the lean gas and/or the air by mounting an aperture adjusting member on the opening of said air port and/or said lean-gas port and adjusting the mixing point of a fuel gas and air.

39. A method of operating a coke oven according to claim 8, further characterized by changing the purging direction of the lean gas and/or the air by mounting an aperture adjusting member on the opening of said air port and/or said lean-gas port and adjusting the mixing point of a fuel gas and air.

40. A method of operating a coke oven according to claim 9, further characterized by changing the purging direction of the lean gas and/or the air by mounting an aperture adjusting member on the opening of said air port and/or said lean-gas port and adjusting the mixing point of a fuel gas and air.